WHAT IS CLAIMED IS:

1. A dynamic seal for a rotary shaft, the seal comprising a sleeve for being constrained in rotation on the shaft and an annular lip of polymer having a low coefficient of friction to come into sliding rotary contact with a stationary casing surrounding said shaft so that the dynamic seal provides sealing between said shaft and said casing, wherein an annular encoder element of magnetizable polymer presenting at least one polarized mark is secured to said sleeve and presents at least one annular surface to which said lip is bonded.

2. A seal according to claim 1, in which the encoder element is made of elastoferrite.

3. A seal according to claim 1, in which the lip is made of PTFE.

4. A seal according to claim 1, in which the lip is bonded directly to the encoder element.

5. A seal according to claim 1, in which the annular surface of the encoder element extends radially.

6. A seal according to claim 1, in which the encoder element is bonded directly to the sleeve, said sleeve being made of metal.

7. A seal according to claim 1, in which the encoder element presents a circular track provided with polarized marks formed by sectors with alternating north and south polarization.

8. A seal according to claim 7, in which the encoder element presents a first annular face facing radially inwards which is bonded directly to an outside wall of the longitudinally-extending sleeve, and a second annular

face facing radially outwards on which the track provided with polarized marks is formed.

9. A seal according to claim 8, in which the second annular face presents a portion extending along a fraction of the shaft which is not surrounded by the stationary casing, the track provided with polarized marks being formed on said portion.

10. A seal according to claim 7, in which the sleeve presents an annular collar extending radially and in which the encoder element presents a first annular face extending radially, which face is bonded directly to said collar, and a second annular face parallel to the first face, on which the track provided with polarized marks is formed.

11. A device comprising a rotary shaft, a casing filled with liquid in which the rotary shaft penetrates, and a dynamic seal according to claim 1 having its sleeve constrained to rotate with the rotary shaft and having its sealing lip in sliding contact with the casing, thereby providing sealing between said shaft and said casing.

12. A method of fabricating a dynamic seal for a rotary shaft according to claim 1, the seal comprising a sleeve, an annular encoder element made of elastoferrite, and a sealing lip made of a polymer having a low coefficient of friction, the method comprising the following steps:

· placing said sleeve, a blank for said encoder element, and a preform for said lip concentrically in a first half-mold, said blank being at least partially in contact with said sleeve, and said preform being at least partially in contact with said blank; and

· hot-pressing by means of a second half-mold to vulcanize said blank and also to shape said blank for the

encoder element and said preform for the lip to take up a determined profile.